R E P O R T R E S U M E S

ED 012 102 EA 000 580

KEYSORT - AN AID TO UNIVERSITY HOUSING.

BY- VAN VLIET, ROBERT
MASSACHUETTS UNIV., AMHERST, OFFICE OF INST. STUD.

PUB DATE APR 67

EDRS PRICE MF-$0.09 HC-$0.80 20P.

DESCRIPTORS- *HOUSING, STUDENTS, FACULTY, *INDEXES (LOCATORS), *ADMINISTRATIVE PROBLEMS, COLLEGES, *UNIVERSITIES, AMHERST,

THE EFFICIENCY OF ADMINISTERING OFF-CAMPUS HOUSING AND UNIVERSITY-OWNED APARTMENTS WAS GREATLY INCREASED WITH THE USE OF KEYSORT. THE KEYSORT PRINCIPLE IS DESCRIBED, AND THE PROCEDURES INVOLVED IN RENTAL LISTINGS AND APARTMENT APPLICATIONS ARE DETAILED. KEYSORT HAS THE FOLLOWING ADVANTAGES--(1) IT PROVIDES THE RIGHT INFORMATION TO THE RIGHT CLIENTS IN A MATTER OF SECONDS, (2) IT REQUIRES ONLY A SMALL STAFF TO SERVE A LARGER NUMBER OF CLIENTS, (3) IT FULFILLS THE SAME FUNCTION AS MORE COMPLEX DATA PROCESSING EQUIPMENT AT A MODEST INITIAL COST, (4) IT ELIMINATES ROUTINE ADMINISTRATIVE WORK, (5) IT PROVIDES A PERMANENT RECORD OF EVENTS AND SUBSEQUENT ACTIONS, AND (6) IT ALLOWS STATISTICAL DATA TO BE EASILY OBTAINED AND USED. (HM)

ED012102

KEYSORT – An Aid to University Housing

by
Robert Van Vliet
Assistant to the Director of Housing
University of Massachusetts at Amherst

Office of Institutional Studies
University of Massachusetts
Amherst

EA 000 580

OFFICE OF INSTITUTIONAL STUDIES

The Office of Institutional Studies (OIS) is a research and service agency that conducts studies on the University and institutions of higher education in general. OIS also provides library materials on higher education, publishes reports, and serves as a clearinghouse of information on the University's growth and development.

KEYSORT-AN AID TO UNIVERSITY HOUSING

by
Robert Van Vliet
Assistant to the Director of Housing
University of Massachusetts at Amherst

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Office of Institutional Studies
University of Massachusetts
Amherst

FOREWORD

Colleges and universities across the United States are currently faced with an unprecedented demand for higher educational opportunity. This increasing pressure for admission to our institutions of higher education can be traced to three main trends: (1) A general population growth with specific emphasis in that segment of the populace under 25 years of age; (2) Greater portions of those citizens eligible to pursue a college education are choosing to do so; (3) College students are continuing their education for a longer period of time.

In attempting to meet this increasing demand our institutions of higher learning are attempting to enroll larger numbers of students. This has put considerable strain on physical facilities. One specific area where these pressures are most noticeable is that of housing. The additional influx of students and the accompanying staff has caused numerous administrative problems for housing officers. While continuing to provide the traditional dormitory accommodations, many schools have turned to off-campus housing and institutionally-owned apartments to provide largely, but not exclusively, for married students and staff members. The University of Massachusetts is one such institution.

Administrators faced with the many problems of providing adequate off-campus housing (up-to-date listings, priority assignments, liaison between tenant and landlord, etc.) constantly seek a system of operation which will provide the proper information to the proper individual at the proper time with the least amount of unnecessary effort. Cost factors and staffing must also be taken into consideration when housing office budgets are prepared.

Robert Van Vliet, Assistant to the Director of Housing at the Amherst campus of the University of Massachusetts has applied the Keysort technique to the administration of off-campus housing. His system, while inexpensive to maintain and fairly simple to operate, does provide the proper information to the right clients within reasonable time limitations. This publication provides a simple, concise explanation of his approach to off-campus and university-owned housing which any college or university, regardless of size, may find helpful in solving its own housing problems.

Additional copies of this publication may be obtained from the Office of Institutional Studies, University of Massachusetts, Amherst, Massachusetts

Raymond Castelpoggi
Assistant Director
Office of Institutional Studies

April 1967
Amherst

TABLE OF CONTENTS

	Page
Introduction	1
The Keysort Principle	2
Privately Owned Off-Campus Housing	4
University-Owned Apartments	7
Advantages of Keysort	12
Other Keysort Applications	12

Illustrations

Illustration No. 1 - Rental Listing Card	3
Illustration No. 2 - Reverse Side of Rental Listing Card	6
Illustration No. 3 - Apartment Application	9
Illustration No. 4 - Reverse Side of Apartment Application	10

Introduction

The administration of off-campus housing and the management of university-owned apartments by a university housing office can often become bogged down by the varied and complex requests for housing that are received from its students and faculty clients. This task can be likened to managing a "lonely hearts club". The administrator must consider a variety of faculty and student housing requirements and then match these requests with the many variables of available housing. Excessive paperwork and clerical staff is frequently required to accomplish this initial mating of prospective landlords and tenants.

Dissatisfaction with past, time consuming administrative procedures prompted an investigation of the methods used by other universities to administer their off-campus and university-owned apartment assignments. With off-campus housing, most universities use either a periodical "list" of available housing, or else current rental information is displayed on a central bulletin board. These methods have the disadvantage of requiring much clerical assistance to keep the rental lists up-to-date. In addition, it is difficult to prevent the many clients that use such a listing service from contacting landlords who prefer to be selective as to a specific type of tenant (faculty, married students, single undergraduate men, etc.). Also, much time is wasted because it is necessary for clients to review all rental listings when their requirements are for a specific type of housing, at a maximum rent, at a specific location, along with other

such variables.

The administration of university-owned apartments at other institutions usually involves the copying of pertinent information from the application onto appropriate "waiting lists". If an applicant is eligible for several types of housing and/or if his desired occupancy date is at various times throughout the year, then these requests have to be indicated on several different "waiting lists". The clerical complexity of such a system is increased whenever an applicant reports a change in his status or interest because all "waiting lists" then have to be changed.

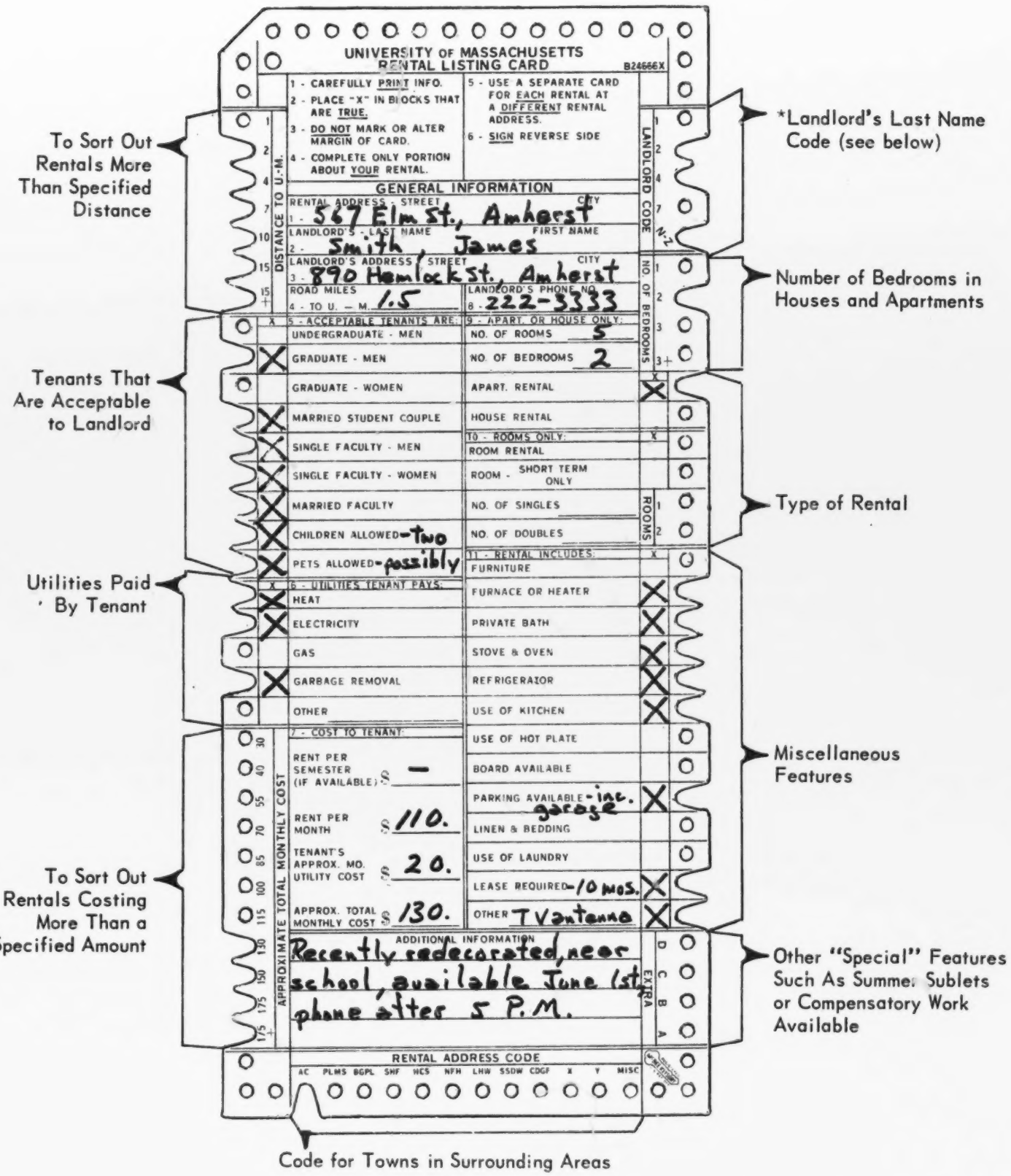
After much investigation and comparison, there began to develop a management system of off-campus housing rentals and university-owned apartment assignments by using a common business aid, a Keysort Card.

The Keysort Principle

Actually, Keysort is not a new procedure. In fact, it has had many varied applications in business for many years and, more recently, it has been used in the field of education.

A Keysort Card comes with a series of holes punched around the perimeter of the card. (See Illustration 1) Each hole is assigned a specific code or classification which is printed next to the hole. In the body of the card, space is provided for typed or written information. When a hole is notched out, by using a simple hand punch device, the card

ILLUSTRATION NO. 1 – RENTAL LISTING CARD


UNIVERSITY OF MASSACHUSETTS
RENTAL LISTING CARD
B24666X
1 - CAREFULLY PRINT INFO.
2 - PLACE "X" IN BLOCKS THAT ARE TRUE.
3 - DO NOT MARK OR ALTER MARGIN OF CARD.
4 - COMPLETE ONLY PORTION ABOUT YOUR RENTAL.
5 - USE A SEPARATE CARD FOR EACH RENTAL AT A DIFFERENT RENTAL ADDRESS.
6 - SIGN REVERSE SIDE
GENERAL INFORMATION
1 - RENTAL ADDRESS - STREET CITY 567 Elm St., Amherst
2 - LANDLORD'S - LAST NAME FIRST NAME Smith, James
3 - LANDLORD'S ADDRESS - STREET CITY 890 Hemlock St., Amherst
4 - TO U. – M. ROAD MILES 1.5
8 - LANDLORD'S PHONE NO. 222-3333
5 - ACCEPTABLE TENANTS ARE:
UNDERGRADUATE - MEN
GRADUATE - MEN
GRADUATE - WOMEN
MARRIED STUDENT COUPLE
SINGLE FACULTY - MEN
SINGLE FACULTY - WOMEN
MARRIED FACULTY
CHILDREN ALLOWED - Two
PETS ALLOWED - possibly
9 - APART. OR HOUSE ONLY:
NO. OF ROOMS 5
NO. OF BEDROOMS 2
APART. RENTAL
HOUSE RENTAL
10 - ROOMS ONLY:
ROOM RENTAL
ROOM - SHORT TERM ONLY
NO. OF SINGLES
NO. OF DOUBLES
11 - RENTAL INCLUDES:
FURNITURE
FURNACE OR HEATER
PRIVATE BATH
STOVE & OVEN
REFRIGERATOR
USE OF KITCHEN
USE OF HOT PLATE
BOARD AVAILABLE
PARKING AVAILABLE - inc. garage
LINEN & BEDDING
USE OF LAUNDRY
LEASE REQUIRED - 10 MOS.
OTHER TV antenna
6 - UTILITIES TENANT PAYS:
HEAT
ELECTRICITY
GAS
GARBAGE REMOVAL
OTHER
7 - COST TO TENANT:
RENT PER SEMESTER (IF AVAILABLE) $ —
RENT PER MONTH $ 110.
TENANT'S APPROX. MO. UTILITY COST $ 20.
APPROX. TOTAL MONTHLY COST $ 130.
ADDITIONAL INFORMATION
Recently redecorated, near school, available June 1st, phone after 5 P.M.
RENTAL ADDRESS CODE
AC PLMS BGPL SHF HCS NFH LHW SSDW CDGF X Y MISC
DISTANCE TO U.-M.
LANDLORD CODE
NO. OF BEDROOMS
ROOMS
APPROXIMATE TOTAL MONTHLY COST
EXTRA
To Sort Out Rentals More Than Specified Distance
*Landlord's Last Name Code (see below)
Number of Bedrooms in Houses and Apartments
Tenants That Are Acceptable to Landlord
Type of Rental
Utilities Paid By Tenant
Miscellaneous Features
To Sort Out Rentals Costing More Than a Specified Amount
Other "Special" Features Such As Summer Sublets or Compensatory Work Available
Code for Towns in Surrounding Areas

*Alphabetical Keysorting – To find Rental Listing Cards of landlords whose last name all begin with the same letter, keysort the entire file first by N–Z code to split alphabet in half. Then sort by code as follows:

Letter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Alphabet Order	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Total Code Nos. Equal Alphabet Order No.	1	2	1 2	4	1 4	2 4	7	1 7	2 7	1 2 7	4 7	1 4 7	2 4 7	Sort N–Z code first for above letters												
														1	2	1 2	4	1 4	2 4	7	1 7	2 7	1 2 7	4 7	1 4 7	2 4 7

becomes a mechanically sortable document. The actual sorting process is quite simple; it consists of passing a "sorting needle", which resembles an ice pick, through a group of cards at the desired code location. When the sorting needle is raised all cards that have been notched for a particular classification fall away from the needle. Those cards remaining on the needle do not contain the specific information that is sought and are therefore set aside. This procedure permits the operator to select from a complete file of information a desired group of classifications and also to put the entire file into a sequence.

If information recorded on a Keysort Card changes, a small gummed sticker is fastened over the notched area, thus eliminating the sorting of this card from the file in the future. At a later date additional or changed information can be recorded by notching the proper hole.

The filing sequence of the complete file is of little importance since only positively coded cards (those that are notched) fall free from the entire file during sorting. This eliminates the need for any specific filing sequence when the cards are returned to the file. In effect, the Keysort principle produces results similar to that which can be obtained by using an IBM sorter, except that control of the operations remains with the using authority at considerable savings in costs.

Privately Owned Off-Campus Housing

The housing office administers to the requirements of two distinct types of clients, landlords and potential tenants,

and it attempts to quickly direct student and faculty clients to housing that satisfies their requirements. Landlords have available a great variety of housing (houses, apartments, and separate rooms) with many distinct features such as size, number of bedrooms, utilities and equipment provided, location, distance from campus, furnished or unfurnished, desired rent, availability date, etc. In addition, landlords usually seek specific classifications of tenants such as single undergraduate men or women, single graduate men or women, married student couples, single faculty men or women and married faculty; and they either do or do not permit children or pets. Similarly, our student and faculty clients who fit the above classifications also seek a variety of housing with the aforementioned factors. Briefly the procedure to administer to the needs of these groups is as follows:

a) The landlord who has a rental available is mailed a Rental Listing Card (see Illustration 1) plus other pertinent housing information and instructions.

b) The landlord completes the Rental Listing Card, signs the reverse side (see Illustration 2), and returns it to the housing office in a self-addressed envelope.

c) A clerk then reviews the Rental Listing Card and notches the appropriate holes next to the specific classifications that have been checked by the landlord. The card is then placed in an active file along with <u>all</u> currently available rentals.

d) When a student or faculty client presents himself at the housing office, his classification and specific housing requirements are determined by a staff member.

e) From the active file, those Rental Listing Cards that reflect the client's eligibility (character-

ILLUSTRATION NO. 2 – REVERSE SIDE OF RENTAL LISTING CARD

University of Massachusetts
Off-Campus Housing Policies

The University Housing Office will accept listings from landlords who agree to adhere to the following policies. All housing:

1. Shall meet all state and local building and use requirements, including, but not limited to, applicable public safety requirements.
2. Shall be conducive to proper educational, social, and moral development of University students.
3. Shall be open for inspection upon reasonable notice by the Housing Office.
4. May be listed only when the householder agrees that no discrimination based on race, color, religion, national origin or ancestry will be practiced. The householder may select his tenant but agrees that this selection will be in accordance with the University of Massachusetts policy of non-discrimination relating to staff and student housing.
5. Notice shall be promptly given to the Housing Office whenever listed housing becomes or ceases to be available for rental.

I have read and understand the above Off-Campus Housing Policies of the University of Massachusetts.

Landlord's Signature: James Smith Date: 4/12/67

Office Use Only

Listed: 4/14/67 Rented:

UO Form 8-64

istics the landlord has indicated as acceptable) and those that satisfy the specific housing requirements of the client are quickly removed by the Keysort procedure. This process of selecting only the appropriate rental listings from the entire active file takes approximately 30 seconds.

f) The client is then directed to a table where brochures, maps of the community, local newspaper classified sections, and a telephone are located. Specific questions are answered and assistance is given by a housing office staff member.

g) Initial client contacts with the landlord are usually made by telephone. If the client and landlord express mutual interest in the available housing, they arrange to meet and inspect the listed dwelling.

h) Once a dwelling is rented, the landlord notifies the housing office by either telephone and/or by returning a self-addressed postcard that has been supplied by the housing office.

i) The Rental Listing Card is then placed, by the landlord's last name, in an inactive alphabetical file. If the same rental becomes available again at a future date, the landlord notifies the housing office and the Rental Listing Card is quickly transferred from the inactive back to the active file.

University-Owned Apartments

The administration of university-owned apartment assignment is complicated by many variables that exist within the apartments themselves and with the applicants who are prospective tenants. Apartment variables are: the existence of two distinct apartment developments, the size and rental rate of several apartment types, the number of bedrooms, the maximum and minimum number of occupants permitted at the time of assignment, and the number of apartments available at various times throughout the year. Applicant variables are: the date the application

is received, rank in a prescribed student-faculty order of priority, marital status, number of children, the type of housing desired, the date the housing is wanted, and the date the applicant joined the university.

Keysort greatly speeds up the administration of this complex procedure of matching the many variables of apartment availability and makeup to the varied criteria used to select tenants from waiting applicants. Without going into great detail, the procedure is essentially as follows:

a) Persons who inquire about university-owned housing are given a brochure that describes the apartments (including floor plans), the eligibility requirements, and the application procedure. Included is a Keysort Apartment Application (see Illustration 3).

b) The applicant completes the form and signs the reverse side. He then returns it to the housing office in a self-addressed envelope.

c) A clerk then reviews the Apartment Application and notches the appropriate holes next to the specific classifications that correspond with the information recorded by the applicant. The card is placed in an active file along with all current apartment applicants.

d) The reverse side of the Apartment Application (Illustration 4) provides space to record the date of any action as well as comments about each applicant. This section is vital because of the necessity to note continued interest in obtaining an apartment and also to record, in chronological order, a "case history" of the contact between the housing office and the applicant.

e) When an apartment tenant decides to leave, he is required to complete an apartment vacate notice at least 30 days before his departure. Along with related information, this apartment vacate notice specifically records the apartment number, rental rate, type of apartment and location, and anticipated date of reassignment after allowing for necessary refurbishing by university maintenance.

ILLUSTRATION NO. 3 – APARTMENT APPLICATION

Applicant's ...st Name Code ...e Illustration No. 1 Alphabetical Keysorting)

Size of Family Unit

Predetermined Order of Priority

Type of Indicated Housing Desired

Month Application Received

Received Current or Past Year

Desired Occupancy Date Current or Future Year or As Soon As Available

Specific Month Occupancy Desired

UNIVERSITY OF MASSACHUSETTS
APARTMENT APPLICATION

OFFICE USE ONLY:
REC'D 1/6/67

APPLICANT NAME: 1 2 4 7 N-Z 1 2

MONTH RECEIVED: J F M A M J J A S O N D CY PY X 7 4 2 1

INSTRUCTIONS - READ FIRST

1 - Carefully read the accompanying "Assignment Procedure".
2 - Print the information, place an "X", or indicate the proper number in the spaces below.
3 - Write "N/A" if not applicable.
4 - Do not mark or alter the margin of the card.
5 - Complete and sign the reverse side of the card.

APPLICANT INFORMATION

OCCUPANTS: 1 2 3 4 5 6 6+

Applicant's Name James Jones Age 25

Spouse's Name Sally Jones Age 23

Number of Children Now 1 Ages 2

If now expecting child, probable birth date 6/15/67

At time of application, the applicant is:

- ☐ – Faculty or Prof. Staff, or
- ☑ – Grad. student or Ass't., or
- ☐ – Undergrad. Class of ____

- ☑ – Married or
- ☐ – Single (includes spouse not accompanying)
- ☐ – Engaged - Marriage Date 11

HOUSING DESIRED

Indicate by number (example - 1st, 2nd, etc.) your order of preference for any apartment you would be willing to accept and that you are eligible for.

CLASSIFICATION: 1 2 3 4 5 6 7 8 9 10 X

"X" - MEANS NOT AVAILABLE	1 ROOM (STUDIO)	2 ROOMS (1 BDRM.)	3 ROOMS (2 BDRM.)	4 ROOMS (3 BDRM.)	GARAGE (ONLY PERSONS ALREADY ASSIGN. UNIV.)
LINCOLN APTS. for Married Students Faculty or Prof. Staff Inst./Ass't Prof.	6	7 2	8 1	X	X
UNIVERSITY APTS. for Faculty or Prof. Staff (All Acad. Ranks)	1	2	3	4	5

HOUSING DESIRED: 1 2 3 4 5 6 7 8 9 10 X

MONTH DESIRED: J F M A M J J A S O N D CY PY AS J F M A M J J A S O N D Y Z

Desired occupancy date (choose only one):

- ☐ – As soon as available, or
- ☑ – Specific date - month(s) and year Aug. or Sept. '67

ADDITIONAL INFORMATION

Permanent Address 123 Main St., Someplace, Mass.

Contact Address 1515 Park St., Amherst, Mass.

Local Phone No. (if avail.) 222-1111 Dept. or Major Microbio.

Faculty only: Position — Appointment Date -/-/-

Student only: Date accepted to U. of M. 12/30/66 Date Studies Completed 6/?/69

D67819X

TURN OVER

EXTRA: A B C D E F G H I J K L M N O P Q R S T U V

Other Occasionally Required "Special" Codes

ILLUSTRATION NO. 4 – REVERSE SIDE OF APARTMENT APPLICATION

Comment

Please read and keep your copy of "Assignment Procedures."

I understand that my assignment of an apartment will be determined by the information on this application and that the information contained hereon is true to the best of my knowledge.

Applicant's Signature: James Jones Date Signed: 1/6/67

Office use only - do not write below.

Date	Action or Comments
1/6/67	Informed applicant that based on past experience we "probably" would be able to make offer for 1Br. not 2Br. Will not be sure until May or June.
3/27/67	Inquired about status. Still interested.
6/2/67	Notified us that 2nd child was born. Still interested.
6/17/67	Sent letter to applicant informing "probable" 1Br. assignment end of summer.
7/24/67	Accepted 1Br. assignment of 311. Lincoln. Still wants 2Br. Keep active for later 2Br. assignment.

Date Offered: 7/18/67 Reply Date: 7/26/67 # Apt. Assign. 311

☑ Lincoln

☐ University

1/1 1/1

f) From the entire active file of apartment applications the apartment assignment is determined by keysorting the entire file in the following order:

1) Applicants who want an apartment at the time the apartment to be vacated is available.

2) Applicants who want this specific type of apartment (number of rooms, size, etc.).

3) Selection of applicants who are eligible to occupy this specific type of apartment as determined by ratio of apartment size to occupant number.

4) Selection of highest eligible group of applicants according to a predetermined hierarchy of priority classification.* If no applicants are found in the highest priority group, proceed to the next group, etc.

Thus from several hundred applications containing a great number of assignment variables, the most eligible applicant for a forthcoming apartment vacancy can be selected in less than one minute.

g) The apartment application and the apartment vacate notice are then stapled together, thus joining the apartment that will be available and the person to whom it will be offered. Appropriate information about the apartment is recorded on an apartment registration form which is then mailed to the applicant along with instructions. The applicant provides the necessary required information, signs the apartment registration, and returns the card to the housing office.

The aforementioned instructions do not dwell upon several other related administrative procedures such as keeping the Rental Listing Cards and Apartment Applications up-to-date, notification to the treasurer's office to start and stop apartment billing,

---

*At the University of Massachusetts apartments are presently offered to applicants in the following order: married faculty, single faculty, married graduate students, married undergraduate students. Married couples with children in the proceeding groups receive preference over childless couples.

and coordination with the maintenance department to refurbish apartments.

Advantages of Keysort

In the operations described and in other applications of the Keysort procedure, certain advantages are apparent. Keysort:

1) Provides the right information to the right clients and it assigns the right people to the right apartment, both in a matter of seconds.

2) Requires only a few clerical personnel and permits a small number of staff to assist a larger number of clients.

3) Provides the same function as other more complex data processing equipment, but at a very modest initial cost.

4) Eliminates routine administrative work so that personnel are better able to perform more important tasks, such as advising and counselling.

5) Provides a permanent record of events and subsequent actions.

6) Allows statistical data to be easily obtained and used.

Other Keysort Applications

The Keysort principle has already been adapted to various uses in education. Some areas of adaptation are: classroom and course scheduling, bibliography indexing, student records and property inventory control, as well as admissions, placement and financial aid, and residence hall assignments. In fact, many cumbersome educational management procedures that require the

manipulation of quantities of variable data may find an effective solution by the adaptation of Keysort.